ESSENTIALS OF GENERAL PRACTICE IN PAKISTAN

Peadiatrics

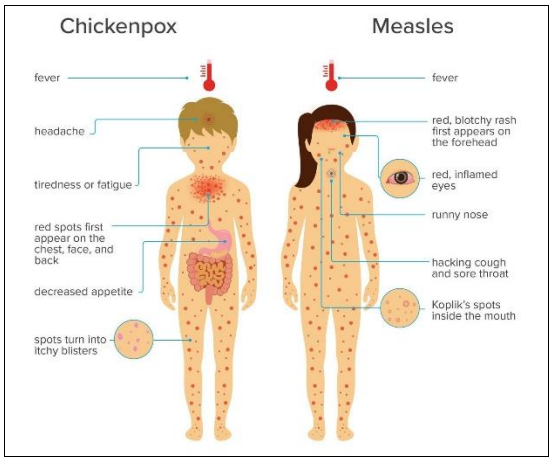
Station 04: (25/6/18) A mother of 1.5 years old concerned about her child who has not started talking yet...Take history and answer the questions. 3-4 min Hx then Questions= Dx? Causes? Referral? Investigation if any?

(01-02-20) STATION Child with pica and worms. Mother present only. Management

Pica is a compulsive eating disorder in which people eat nonfood items like dirt, clay, and flaking paint. It is mostly related to malnutrition and iron deficiency anemia in children.
Health problems associated with PICA include iron-deficiency anemia, lead poisoning, constipation or diarrhea, worm infestation, intestinal infections, intestinal obstruction and mouth or teeth injuries etc. psychiatric issues and intellectual disabilities are also seen in children with pica.
Diagnosis is mainly clinical based on history but CBC (anemia), stool DR (ova parasite, lead levels and abdominal imaging may be required.
The first-line treatment for pica involves correction of mineral and nutrient deficiencies. In many cases, pica resolves as deficiencies are corrected. Mother/caretaker should educate child to differentiate between edible and nonedible items along with reinforcement of non-pica behaviors with rewarding.

For the worms associated with pica deworming is required with single dose albendazole (400 mg) or mebendazole (500 mg). A half-dose of albendazole (i.e. 200 mg) is recommended for children younger than 24 months of age.

(01-11-2018) 1. Measles child with mother. Take history and discuss management with patient. Examiner asked treatment.



	Chickenpox	Measles
Symptoms	• Fatigue • Mild headaches • Fever • Chills • Muscle or joint pain • Itchiness • Red spots that turn into blisters	• Coughing • Fever • Runny nose • Puffy eyes • Conjunctivitis • Köplik's spots (small white spots at the centre of a red lesions inside the cheeks) • Red or brown rash, with intervals of unaffected skin
Incubation	From 10 to 21 days after exposure.	About 10 days after exposure.
Infectious period	From 2 days before the appearance of the first symptoms until 7 days after onset.	From 4 days before the appearance of the rash until 5 days after onset.

1. The first symptoms of a measles infection are usually a hacking cough, runny nose, high fever, and red eyes. Kids also may have **Koplik's spots** (small red spots with blue-white centers) inside the mouth before the rash starts.
2. The rash breaks out 3–5 days after symptoms start, sometimes along with a high fever up to 104°F (40°C). The red or reddish-brown rash usually begins as flat red spots on the forehead. It spreads to the rest of the face, then down the neck and torso to the arms, legs, and feet. The fever and rash slowly go away after a few days. (sequence in general: forehead, face, torso and limbs).
3. Diagnosis is clinical. History of contact with measles patient, respiratory symptoms and classical rash, help making the diagnosis.
4. Measles (**rubeola)** is caused by a virus, and it has no specific treatment. Symptoms subside generally in 2-3 weeks. Supportive management includes bed rest and good hydration. Cut finger nails and avoid scratching as much as possible. Keep child isolated to prevent spread of this contagious disease. Cover your nose and mouth if you need to cough or sneeze. Dispose of all used tissues promptly. If you don't have a tissue available, sneeze into the crook of your elbow, not into your hand. Be sure to wash your hands frequently and to disinfect any surfaces or objects that you touch frequently.
5. Pharmacological management: paracetamol, cough syrup, antihistamine (fexofenadine, loratidine, diphenhydramine) and calamaine lotion to relief skin itch.

6. Note: in Pakistan 2 doses of measles vaccine re given, first at 9 months and second in the second year of life.

GYNAECOLOGY AND OBSTETRICS

(01-11-2018) 7.antenatal care of 1st pregnancy with abdominal pain history .question by examiner. Diet treatment drugs to avoid. Follow up visits

A pregnancy nutrition plan should include:

1. The optimal protein intake, from plant and animal sources, such as fish, chicken, eggs, and lentils.
2. Fiber-rich carbohydrates, from sources such as oats, sweet potatoes, and fruit.
3. Healthy fats, from sources such as avocados, nuts, seeds, olive oil, and yogurt.
4. The food sources for iron include lean meats, poultry, salmon (fish), legumes (daalain), dark green vegetables.
5. Avoiding caffeine, alcohol, tobacco and undercooked meat and eggs.

Drugs to be avoided in pregnancy

Category D (definite evidence of fetal risk) and category X (absolute contraindication) drugs need to be avoided in pregnancy. these include aspirin Ibuprofen, Isotretinoin, Thalidomide, Aminoglycosides (streptomycin, kanamycin), Tetracyclins/ doxycyclin, certain antidepressants, Lithium, phenytoin, chemotherapies, Fluconazole, Albuterol=salbutamol.

Drugs	Indication	FDA category
Doxycycline	UTI	D
Gentamicin	UTI	D
Chlorpromazine	HEG	D
Tetracycline ointment	Trachoma	D
Diazepam	Preeclampsia	D
Phenobarbital	epilepsy	D
Phenytoin	epilepsy	D
Misoprostol	Labor	X

Table 1. 2016 WHO ANC model
First trimester
Contact 1: up to 12 weeks
Second trimester
Contact 2: 20 weeks Contact 3: 26 weeks
Third trimester
Contact 4: 30 weeks Contact 5: 34 weeks Contact 6: 36 weeks Contact 7: 38 weeks Contact 8: 40 weeks
Return for delivery at 41 weeks if not given birth. *Note:* Intermittent preventive treatment of malaria in pregnancy should be started at ≥ 13 weeks.

Quality ANC has several components: Ensure early registration and see to it that the first check-up is conducted within 12 weeks (first three months of pregnancy). Track every pregnancy for conducting at least eight antenatal check-ups. Administer two doses of TT injection. Provide at least 100 tablets of IFA (iron folic acid).

Components of every antenatal check-up: Take the patient's history. Conduct a physical examination–measure the weight, blood pressure and respiratory rate and check for pallor and oedema. Conduct abdominal palpation for foetal growth, foetal lie and auscultation of Foetal Heart Sound (FHS) according to the stage of pregnancy.

Investigations: CBC, Urine DR, FBS/RBS, OGTT (24-28 weeks/ 6-7 month), Blood group/Rh factor, Venereal Disease Research Laboratory (VDRL)/Rapid Plasma Reagin (RPR) test to rule out syphilis, Human Immunodeficiency Virus (HIV), HBsAg/ Anti HCV. Most healthy women receive **two ultrasound scans** during pregnancy: 1. In the first trimester to confirm the due date. 2. Anamoly scan at 18-22 weeks to confirm normal anatomy and the sex of the baby.

D. **Counselling**
Help the woman to plan and prepare for birth (birth preparedness/micro birth plan). This should include deciding on the place of delivery and the presence of an attendant at the time of the delivery. Advantages of institutional deliveries and risks involved in home deliveries. Advise the woman on where to go if an emergency arises, and how to arrange for transportation, money and blood donors in case of an emergency. Educate the woman and her family members on signs of labour and danger signs of obstetric complications. Emphasize the importance of seeking ANC and PNC. Advise on diet (nutrition) and rest. Inform the woman about breastfeeding, including exclusive breastfeeding. Provide information on sex during pregnancy. Warn against domestic violence (explain the consequences of violence on a pregnant woman and her foetus). Promote family planning.

Medications in pregnancy: Provide daily oral iron and folic acid supplementation with 30 to 60 mg of elemental iron and 400 µg (0.4 mg) of folic acid to prevent maternal anaemia, puerperal sepsis, low birthweight, and preterm birth. Daily calcium supplementation (1.5–2 g oral elemental calcium) is recommended to reduce risk of pre-eclampsia.

Tetanus vaccine in pregnancy

If a pregnant woman has not previously been vaccinated or if her immunization status is unknown, she should receive two doses of tetanus toxoid-containing vaccine (TTCV) 1 month apart, with the second dose given at least 2 weeks before delivery. In most people, two doses protect against tetanus infection for 1–3 years. A third dose is recommended 6 months after the second dose, which should extend the vaccine's protection to at least 5 years.

Two further doses for women who are first vaccinated against tetanus during pregnancy should be given after the third dose, in the 2 subsequent years or during two subsequent pregnancies. If a woman has received one to four doses of a TTCV in the past, she should receive one dose of TTCV during each of her subsequent pregnancies, for a total of five doses (five doses protects a woman throughout the childbearing years).

In endemic areas, preventive anthelmintic treatment is recommended for pregnant women after the first trimester as part of worm infection reduction programmes. Endemic areas are areas where prevalence of hookworm and/ or whipworm infection is 20% or more and prevalence of anaemia among pregnant women is 40% or higher.

Vitamin A supplementation is only recommended for pregnant women in areas where vitamin A deficiency is a severe public health problem, to prevent night blindness. Give vitamin A daily or weekly (up to 10,000 IU per day or weekly dose of up to 25,000 IU).

Intermittent Preventive Treatment of Malaria in Pregnant Women (IPTp). IPTp entails administration of a curative dose of an effective antimalarial drug (currently **sulfadoxine-pyrimethamine**) to all pregnant women without testing whether or not they are infected with the malaria parasite.

Causes of fever after normal vaginal delivery (reference Medscape)

Postpartum endometritis: gentamycin plus clindamycin.

Wound infection/episiotomy infection: drainage, debridement, irrigation, broad spectrum antibiotics.

Mastitis: rest, hydration, analgesics, breast support, antibiotics

Breast abscess: 1. continue breast feeding, if difficulty feeding then use breast pump, 2. antibiotics: augmentin / flagyl. 3. Drainage.

UTI: hydration, cran berry syrup, antibiotics (trimethoprim- sulfamethoxazole), nitrofurantoin, ciprofloxacin.

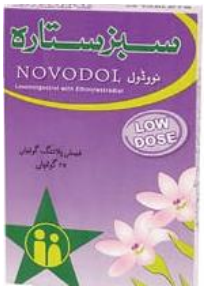
HRT	Increased risk of DVT/clots; break through vaginal bleed
Estrogen only pills/ HRT	Increased risk of breast/ovarian carcinoma if used for > 10 years
OCPs	Increased risk of Ca breast. Decreased risk of endometrial/ovarian Ca

(01-02-20) STATION Female having 3 kids comes for emergency contracepion advice

ECP: emergency contraceptive pill

Tab levonorgestril 1.5 mg one dose as emergency contraceptive pill.

Combined OCPs:



Each strip of Novodol contains 21 white colored tablets (each containing Levonorgestrel 0.15mg, Ethinylestradiol 0.03mg) and 7 brown tablets (each containing Ferrous Fumarate EP 75mg).

Before initiating OCPs: ask for history of migraine, hypertension, liver disease, clotting disease, DVT, Ca breast, Ca ovaries.

INJECTABLES

Femiject provides effective contraception for one month. The product contains 50mg/ml Norethisterone and 5mg/ml Estradiol Valerate.

Novaject provides effective contraception for two months. The product contains Norethisterone 200mg/ml.

Depotone provides effective contraception for three months and requires only four visits to the service provider per year. The product contains 150 mg/ml of Medroxyprogesterone acetate.

INTRAUTERINE DEVICES

Cu T .. 5 and 10 years protection

(01-02-20) STATION Mother present. She needs advice for her daughter with irregular mentruation, menorrhagia

Staion 05: (25/6/18) A 30 yrs old female came with vaginal discharge. Take history and answer the questions: Q1 what is diagnosis,(candidiasis because whitish and itchy) treatment? Predisposition? Dx? treatment of recurrence, lab test to evaluate recurrence (FBS).

Vaginal discharge {CBT= Candida, BV, Trichomoniasis}

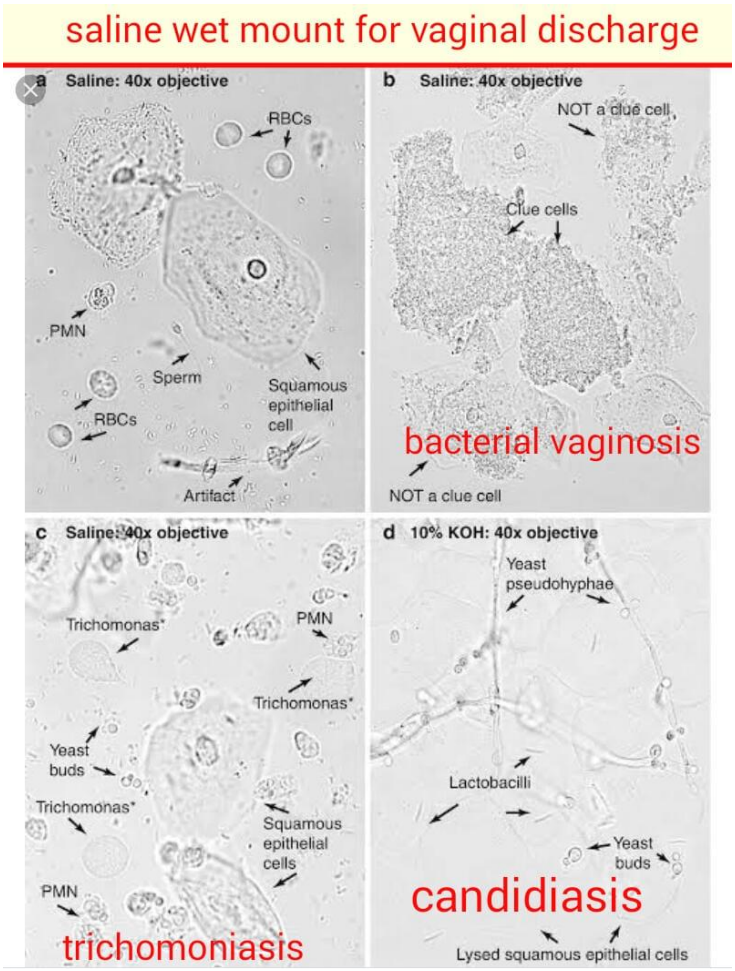
History taking:

1. Pani kab say aa raha ha, kis rang ka ha, ziada aata ha yak am, badbu aati ha, garha ha ya patla? (colour consistency ordor, quantity and duration of discharge).
2. Neechay Kharish, sozish, dard, jalan ya surkhi mehsos hoti ha? (itch, erythema, vaginal pain)

3. Pehlay bhi is tarah ki takleef howe ha (past history)
4. Kia shohar ko bhi is tarah ki shikayat ha (STD)
5. Akhri baar mahwari kitnay din pehlay aye (LMP). Bacchay kitnay hain?
6. Hamal roknay k liye koe challa ya doosray tareeqay istemaal karti hain (OCPs, IUCD)
7. Neechay ki safai k liye lotion ya cream istemal karti hain (douching practices)
8. Kia pait may neechay ki taraf dard, bukhaar, sardi lagnay ya ulti matli ki shikayat ha (systemic symptoms: lower abdominal pain fever, chills, nausea, vomitings)

Labs: high vaginal swabs, microscopy, pH testing, urinre DR, C/S

	Candida	Bacterial vaginosis	Trichomoniasis
Microscopy	Budding fungal hyphae	Clue cells. +ve whiff test.	Motile flagellates: trichomonads
PH testing	<4.5 acidic	5-6	5-7
Treatment	Clotrimazole cream; Terbinafine cream; Cap **fluconazole 150 mg** single dose	Metronidazole 400 mg BD for 5-7 days	Metronidazole 400 mg BD for 5-7 days



Bacterial vaginosis

Whiff test: vaginal discharge + KOH 10%= release of amines giving fishy order.
Clue cells are vaginal epithelial cells covered with rods and cocci. Decreased lactobacilli. Absent WBCs.

Gonorrhea

Mucopurulent vaginal, cervical and urethral discharge. Vaginal bleeding. Cervical fragility. Cervical motion tenderness during bimanual pelvic examination. Fullness/tenderness of adnexa. Pain during intercourse.

Diagnosis: Culture: most common diagnostic test for gonorrhea. DNA probe test, PCR assay, ligand chain reaction (LCR). CBC/ ESR/ CRP. Pregnancy test

Treatment: Inj ceftriaxone- 500 mg I/M single dose. If coinfection with chlamydia is not ruled out then tab doxycycline 100mg BD -7 days.

Chlamydia trachomatis:

May present as coinfection with gonorrhea.

Treatment: tab doxycycline 100mg BD -7 days

PCOs

Differentials: simple obesity, hypothyroidism, exogenous steroid use, cushing.

Labs: U/S pelvis: cystic ovaries, LH:FSH ratio increased (> 3), free testosterone (↑), TSH (↑), Prolactin (↑), β-HCG to exclude pregnancy in amenorrhea.
Treatment: weight loss with diet /exercise, Metformin (glucophage), OCPs for menstural irregularities; clomiphene for infertility.

Nipple discharge

Labs: pregnancy test, prolactin, TSH, U/S breast for <30 years age, mammogram for >30 years age.
Treatment: bromocriptine, cabergoline for hyperprolactinemia. For prolactinomas: transphenoidal resection.

Menorrhagia/ heavy periods page 161 of notes

Ectopic Pregnancy page 183 0f notes

Oncology

Oncologist Robert Buckman's 'SPIKE' protocol has six-steps for breaking bad news.

1. Getting started.
2. Finding out how much the patient knows.
3. Finding out how much the patient wants to know.
4. Sharing the information.
5. Responding to the patient's feelings.
6. Planning and follow-through.

Ca breast

Screening: self-breast examination, clinical examination

Labs: U/S Breast (< 30 years age); mammogram (> 30 years age); needle biopsy;

Triple-positive breast cancer cells have all three types of cell surface receptors used to classify breast cancer: estrogen, progesterone and human epithelial growth factor receptor 2 (HER2).

Management of breast cancer

Surgery and radiation therapy, along with adjuvant hormone or chemotherapy when indicated, are considered primary treatment.

A. Surgical therapy may consist of lumpectomy or total mastectomy.
B. Radiation therapy may follow surgery in an effort to eradicate residual disease while reducing recurrence rates. There are 2 general approaches for delivering radiation therapy:

- External-beam radiotherapy (EBRT)
- Partial-breast irradiation (PBI)

Surgical resection with or without radiation is the standard treatment for ductal carcinoma in situ.

C. Pharmacologic agents: Pharmacologic treatment for metastatic breast cancer is typically selected according to the molecular characteristics of the tumor. Agents used (alone or in combination) include the following:

1. Hormone therapy
    a. Tamoxifen: selective estrogen receptor blocker. Decreases estrogen effect.
    b. Letrozole is an aromatase inhibitor which is used in the treatment hormone-receptor-positive breast cancer in women after menopause. It decreases estrogen.
2. HER2-targeted therapy (monoclonal antibodies eg, trastuzumab (side effect cardiomyopathy)

D. **Chemotherapy** (eg, cyclophosphamide, doxorubicin, carboplatin, methotrexate)

Mortality: The average 5-year survival rate for women with **non-metastatic invasive breast cancer is 90%**. The average 10-year survival rate for women with non-metastatic invasive breast cancer is 84%.

Ca ovary

Investigations: imaging of pelvis and abdomen (U/S, CT, MRI); CXR, mammography (estrogen producing ovarian cancers increase risk of ca breast)
Treatment: extensive debulking surgery (bilateral salpingoophorectomy with hysterectomy—check?)
Chemotherapy: cisplatin + paclitaxel
Radiotherapy
Mortality: 5 years survival rate is 48%.

Ca endometrium

Investigations: pelvic exam, pelvic and abdominal imaging (U/S, CT), endometrial sampling/ biopsy; DRE (digital rectal exam).
Treatment:

Surgery: total hysterectomy with bilateral salpingoophorectomy along with pelvic and para aortic lymphadenectomy.
Chemotherapy: cisplatin
Mortality: The 5-year survival rate for people with uterine cancer is 81%. The 5-year survival rates for white and Black women with the disease are 84% and 63%, respectively. Black women are more likely to be diagnosed with more aggressive endometrial cancers with lower survival rates.

Ca cervix

Prevention:

A. Papa smear/cytology
B. 9-valent HPV vaccine - [9vHPV]

1. The ACS (American cancer society) recommends that all girls and boys aged 11-12 years receive the HPV vaccine.
2. Vaccination should occur in females aged 13-26 years and males aged 13-21 years who have not been previously vaccinated or who have not completed the 3-dose series.

Screening:

1. < 21 years: No screening recommended
2. 21-29 years: Cytology (Pap smear) alone every 3 years
3. 30-65 years: Human papillomavirus (HPV) and cytology cotesting every 5 years (preferred) or cytology alone every 3 years (acceptable)
4. >65 years: No screening recommended if adequate prior screening has been negative and high risk is not present

Risk factors:

HIV; HPV; Using birth control pills for a long time (five or more years); Having given birth to three or more children; Having several sexual partners.

Investigations: pap smear, colposcopy, colonization of cervix, cystoscopy, proctosigmoidoscopy, CXR.
Treatment: CIN: stage 0 cancer. locally ablasive procedures: 1. cryosurgery, 2. laser ablation, 3. loop excision.
For higher stages:
Radiotherapy: Combined external beam radiation with brachytherapy.
Surgery: Radical hysterectomy with bilateral pelvic lymphadenectomy
Chemotherapy: cisplatin

Mortality: Cervical cancer is the third most common malignancy in women worldwide. The 5-year survival rate for all people with cervical cancer is **66%**. For white women, the 5-year survival rate is 71%. For Black women, the 5-year survival rate is 58%.

INFECTIOUS DISEASES

Station 03: (25/6/18)
50 yrs old male with high grade fever for 2 days, Command written on paper was take a history of fever and Answer the examiner at the end. After full Hx of PUO in 3-4 min examiner showed (high load of plasmodium vivax, falciparum note seen. Viva question: Various treatment, treatment of recurrence, non pharma, pharmacological.

(01-02-20) STATION Patient with hx of recurrent fever with rigors .hx and management. report of p vivax and p falciparum positive ...case of recurrent malaria

Rabies

(01-11-2018) 10.young girl with dog bite. History, counsel for full management to the pt. examiner ask the schedule of vaccine.

Reassurance, Soothing and Counseling: All animal bite victims are fearful and anxious. Reassure and soothe the child, so that the child lets you handle the wound.

Assessment of the number, location and depth of wound/s: There may be one or more wounds. Undress the child to look for more bites and scratches. Children often do not report accurately out of fear. Very often only one wound is reported.

Wound washing: Wearing protective latex gloves immediately. Flush the wound/s with clean, flowing tap water and scrub with ordinary soap and water. If the wound is deep, flush with a normal saline. Severe wounds are often contaminated with dust and dirt from the street. By proper cleansing for 10 - 15 minutes, dirt and saliva should be removed and then a local antiseptic like pyodine should be applied. Do not apply tincture iodine as this causes skin and tissue burn.

Soap causes denaturing of the virus protein and destroys the virus. Proper and early wound cleansing can reduce chances of developing rabies by 1/3rd. Wound washing should actually be taught in the community to save time and improve outcome before the victim reaches a hospital. Even if the wound has been washed elsewhere, it should be done again under proper conditions. If home remedies like oil, chilly,
turmeric, etc have been applied, these should be removed with flushing and deep cleansing.

Post Exposure Prophylaxis (PEP)

A. Rabies Vaccine:

Essen Regimen is the gold standard for PEP for all Category II and III bites. Schedule: Day 0, 3, 7, 14, 28. (5 vials, 5 visits). Modern Cell culture vaccine (CCV) potency of 2.5 IU/dose, is required to induce immunological response. A protective neutralizing antibody (NAB) level of 0.5 IU/ml or more is achieved in 2 weeks after giving the first 3 doses of the Essen regimen. Thereafter, the 4th and 5th doses boost the immune response further. If the biting dog is alive and healthy at the end of 10 days, you may discontinue the vaccine series, or give the last dose and make it a "pre-exposure prophylaxis regimen". Vaccine is given in deltoid or anterolateral thigh muscle and not intragluteal.

B. Rabies Immune Globulin (RIG)

RIG must be given in all Category III wounds once, at the same time as the vaccine on Day 0. If, for any reason RIG was not given on Day 0 along with vaccine, it may be given up to Day 7, but not later since it is likely to interfere with vaccine induced antibody production. **Dose:**

(a). Equine Rabies Immune Globulin (ERIG) = 40 IU /kg body weight, maximum 3000 IU.

(b) Human Rabies Immune Globulin (HRIG) = the dose is 20 IU/kg body weight, maximum 1500 IU. It has no side effects and its many times more costly than ERIG.

Weigh the patient and calculate the exact quantity of RIG required. If there is a small, single wound, draw the entire calculated amount in a syringe with 26 G needle. If there are several wounds, then draw up the RIG, plus an estimated amount of normal saline to dilute out the RIG. Wearing latex gloves infiltrate into the depth and around all sides of the wound in all directions, to neutralize virus particles. If there is any remaining RIG, inject deep into a muscle away from the vaccine site**. *Failure to use RIG in a Category III bite is one of the causes of failure of post exposure prophylaxis despite good vaccine injection.***

Causes of failure of PEP:

1. RIG not used at all, injected only IM and not into wounds, or not all bite wounds injected. 2. Vaccine or RIG of poor quality. 3. Vaccine injected into gluteus, where absorption is poor. 4. An exceptionally large rabies viral load was introduced and the wound not properly washed. 5. Virus was injected directly into a nerve. 6. Wound was sutured prior to RIG infiltration, further spreading the virus. 7. Inadequate calculation of RIG volume, not diluted to sufficient volume to cover all bite wounds. 8. Unrecognized and unreported deviations from WHO protocol. 9. RIG was given more than 8 days after vaccine.

Wound categorization is essential to help guide further management

Category	Depth	Action
I No risk	Touching or feeding of animals, licks on intact skin	Reassurance only No vaccine needed
II Moderate risk	Nibbling of uncovered skin. Minor scratches or abrasions without bleeding	Start Vaccine series Day 0*
III High risk	- Single or multiple transdermal bites or laceration. - Scratches on broken skin contaminated with saliva. - Contamination of mucous membrane of eyes, mouth, nose or wounds with saliva or discharges from rabid animals.	Start Vaccine Series Day 0* plus Infiltrate RIG into wound at same time

*If the biting dog is alive and healthy at the end of 10 days, you may discontinue the vaccine series.

Typhoid

Clinical features: Fever, body aches, coated tongue, relative bradycardia, rash, abdominal distension, diarrhea or constipation, anemia, leukopenia, thrombocytopenia.

Labs: blood culture is gold standard, CBC, CRP, ESR, LFTs (↑ bilirubin, ↑ transaminases), electrolytes (↓ Na, ↓ K). widal and typhidot not recommended and not included in case definition.

Chronic infection: person excreting S. Typhi in blood or stools for more than one year after blood culture confirmed episode of typhoid infection.

Management Guidelines:

1. Antipyretics as required. Adequate rest, hydration, and correction of fluid electrolyte imbalance. Soft, easily digestible diet if there is no abdominal distension or ileus.
2. Send two sets of blood culture are optimal before starting antibiotic therapy. It is important to rule out malaria, dengue and other possible causes of febrile illness. After sending baseline investigations, including blood cultures, commence empirical treatment for suspected enteric fever with **either oral cefixime 400 mg q12hr or IV Ceftriaxone 1gm q12hr or 2gm q24hr (10-14 days).** Once the results of blood culture are available, modify antibiotic regimen based on the final antibiotic sensitivity results.
3. For XDR typhoid: **cap azithromycin 1 gm q 24 hourly x PO- 7-10 days. OR inj meropenem 1gm iv 8 hourly 10-14 days OR inj imipenem 1 gm iv 8 hourly 10-14 days.**
4. Monitor for complications like abdominal distension, tenderness, vomiting, alteration of GCS and laboratory parameters like bicytopenia. In case of severe illness monitor blood pressure, blood sugar, electrolytes, hemoglobin, platelet counts and liver functions as indicated.

Complicated Typhoid: Suspected or culture proven enteric fever with jaundice, drowsiness, severe abdominal pain and intestinal haemorrhage (3rd week), severe sepsis or septic shock. (see table on left)

Abdominal
- Gastrointestinal perforation
- Gastrointestinal hemorrhage
- Hepatitis
- Cholecystitis (usually subclinical)

Cardiovascular
- Asymptomatic electrocardiographi
- Myocarditis
- Shock

Neuropsychiatric
- Encephalopathy
- Delirium
- Psychotic states
- Meningitis
- Impairment of coordination

Respiratory
- Bronchitis
- Pneumonia (*Salmonella enterica* se *Streptococcus pneumoniae*)

Hematologic
- Anemia
- Disseminated intravascular coagula (usually subclinical)

Other
- Focal abscess
- Pharyngitis
- Miscarriage
- Relapse
- Chronic carriage

Prevention: Typhoid vaccine. Hand washing. Boiling of water before consumption. Wash vegetables and fruits thoroughly before eating. Avoid foods and beverages from street vendors. Ensure that cooked food is covered to protect it from flies. Avoid undercooked meat.

Malaria – WHO July 2021 guidelines

Life cycle of malaria: During a blood meal, a malaria-infected female Anopheles mosquito inoculates sporozoites into the human host. Sporozoites infect liver cells and mature into schizonts, which rupture and release merozoites.

Vivax and falciparum develop latent forms in the liver. They are known as hypnozoites and causes relapse or recurrence of malaria.

Pattern of fever:

1. **Quotidian** = daily → falciparum, Knowlesi
2. **Tertian** = fever every 3rd day i.e. day 1,3,5 etc or fever on alternate days → P. vivax and P. Ovale causes benign tertian; P. falciparum causes malignant tertian.
3. **Quartan** = fever every 4th day …. day 1,4,7 etc. = 2 days gap→ P. malariae

Diagnosis: CBC (low Hb, low PLT) with peripheral film (plasmodium species); Malarial ICT ; Malarial PCR; Supportive labs: LFTs, PT, UCEs

Treatment: Treat children and adults with uncomplicated *P. falciparum* malaria (except pregnant women in their first trimester) with one of the following ACTs (artemisinin-based combination therapy):

1. **artemether + lumefantrine (Artem DS)**
2. artesunate + amodiaquine
3. artesunate + mefloquine
4. dihydroartemisinin + piperaquine
5. artesunate + sulfadoxine–pyrimethamine (SP).

Body weight (kg)	Dose (mg) of artemether + lumefantrine given twice daily for 3 days
5 to < 15	20 + 120
15 to < 25	40 + 240
25 to < 35	60 + 360
≥ 35	80 + 480

Recommended dosage regimen: Artemether + lumefantrine is given twice a day for 3 days (total, six doses). The first two doses should, ideally, be given 8 h apart.

Body weight (kg)	Single dose of primaquine (mg base)
10[a] to < 25 3.75	3.75
25 to < 50 7.5	7.5
50 to 100 15	15

Prevention of recurrence of malaria: primaquine once a day for 2 weeks. Caution: hemolysis in G6PD Deficiency.

Treatment of malaria in pregnancy: Treat pregnant women with uncomplicated *P. falciparum* malaria during the first trimester with 7 days of quinine + clindamycin. Although there is increasing data about safety of artemether lumefantrine. **QUNININE 10 mg salt/kg maximum 600mg) TDS plus CLINDAMYCIN 10 mg/kg body weight (maximum 600mg) BD for seven days**. In 2nd and 3rd trimester use artemether and lumefantrine.

Treatment of severe/ complicated malaria: Parenteral artesunate is the treatment of choice for all severe malaria. There is a substantial reduction in mortality with intravenous or intramuscular artesunate as compared with parenteral quinine. Furthermore, artesunate is simpler and safer to use. DOSE: Inj artemether 160 mg IM loading then 80 mg BD for 3 days. Can switch to oral ACTs, if patient is able to tolerate orally after 24 hours.

Drugs used in **IPTp** (intermittent preventive treatment of malaria in pregnancy using sulfadoxine-pyrimethamine **(IPTp-SP), SMC** (Seasonal malaria chemoprevention) and IPTi (intermittent preventive treatment of malaria in infants using sulfadoxine-pyrimethamine) should not be used as a component of first- line treatments in the same country or region.

Severe falciparum malaria: For epidemiological purposes, severe falciparum malaria is defined as one or more of the following, occurring in the absence of an identified alternative cause and in the presence of *P. falciparum* asexual parasitaemia.

1. Impaired consciousness: A Glasgow coma score < 11 in adults or a Blantyre coma score < 3 in children
2. Prostration: Generalized weakness so that the person is unable to sit, stand or walk without assistance
3. Multiple convulsions: More than two episodes within 24 h
4. Acidosis: A base deficit of > 8 mEq/L or, if not available, a plasma bicarbonate level of < 15 mmol/L or venous plasma lactate ≥ 5 mmol/L. Severe acidosis manifests clinically a srespiratory distress (rapid, deep, laboured breathing).
5. Hypoglycaemia: Blood or plasma glucose < 2.2 mmol/L (<40 mg/dL)
6. Severe malarial anaemia: Haemoglobin concentration ≤ 5 g/dL or a haematocrit of ≤ 15% in children < 12 years of age(< 7 g/dL and < 20%, respectively, in adults) with a parasitecount > 10 000/µL
7. Renal impairment: Plasma or serum creatinine > 265 µmol/L(3 mg/dL) or blood urea > 20 mmol/L
8. Jaundice: Plasma or serum bilirubin > 50 µmol/L (3 mg/dL)with a parasite count > 100 000/ µL

9. Pulmonary oedema: Radiologically confirmed or oxygen saturation < 92% on room air with a respiratory rate > 30/min, often with chest indrawing and crepitations on auscultation
10. Significant bleeding: Including recurrent or prolonged bleeding from the nose, gums or venepuncture sites; haematemesis or melaena
11. Shock: Compensated shock is defined as capillary refill ≥ 3 or temperature gradient on leg (mid to proximal limb), but no hypotension. Decompensated shock is defined as systolic blood pressure < 70 mm Hg in children or < 80mmHg in adults, with evidence of impaired perfusion (cool peripheries or prolonged capillary refill). 12. Hyperparasitaemia*: P. falciparum* parasitaemia > 10%

Prevention: Nets, Mosquito repellents, Insectides sprays, transallethrin coils.

RESPIRATORY

Inhaler technique

MDIs – shake your inhaler before using it. Hold the inhaler with the mouthpiece down. Breathe out fully before using inhaler. Place your lips around the mouthpiece so that you form a tight seal. Lift your chin slightly before breathing in. You need to breathe in slow and steady and, at the same time, press the canister on the inhaler once. Continue to breathe in slowly over 3 to 5 seconds, until your lungs feel full. Hold your breath for 5-10 after taking inhaler. Rinse your mouth out after using a steroid inhaler to prevent oral thrush.

Station 01: (25/6/18)
25 year old male with history of fever for 5 days, productive cough and right sided chest pain, perform respiratory exam.

Viva questions: 1. What is your diagnosis?
2. What findings do u expect? (inspection, palpation, percussion, auscultation)
What's bronchial breathing, vesicular?
Difference? Is there Gap in inspiration/expiration? How u will do Percussion (plz do on table) the lower finger (nonstriking finger) is called? (plexi meter). The striking finger is called? (plexer).

Station 08: (25/6/18) 30 years old male with 02 day history of flue and cold….provide him counselling for smoking cessation

(01-11-2018) 9.bronchial asthma pt .do full chest exam and explain inhaler technique

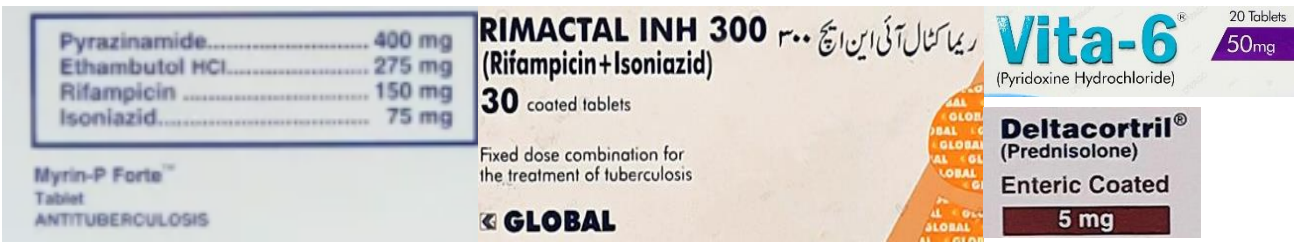
Table-8: New cases and previously treated cases regimen and fixed-dose combinations dosages in adults

		Duration	Weight band (kg)/ based FDC drug dose (Tablets)		
			30-39	40-54	55 & >
NEW	**New TB and B+ and CD Previously treated TB cases**				
Initial Phase	HRZE (H 75mg + R 150mg + Z 400mg + E 275mg)	2month	2	3	4
Continuation Phase	HR (H 75mg + R 150mg)	4month	2	3	4

Duration of treatment in EP TB

Site of EP	Regimen	Total duration
Cervical lymph node & pleural effusion	2 HRZE / 4 HR	6 months
TB meningitis	2 HRZE / 10 HR	12 months
Other forms of EP	2 HRZE / 10 HR	12 months

Adjuvant steroids (prednisolone or dexamethasone) 6-8 weeks for tuberculous meningitis and pericarditis



Central nervous system

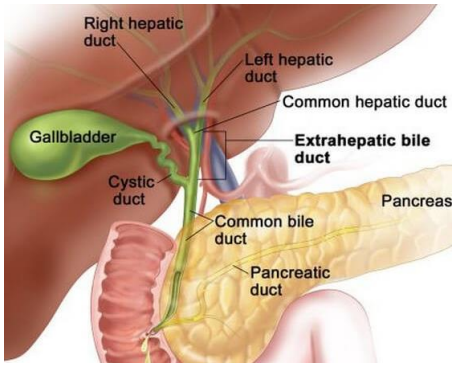
Station 2: (25/6/18) 50 years old male with right sided facial weakness since last night, he is hypertensive and takes losartan 50 mg OD, his bp is 130/80. Perform his CVS exam and relevant cranial nerves cranial nerves 1, 5, 8 and 12 are normal.
Note: here question is to do CVS and relevant cranial nerves, so first do CVS exam then screen for cranial nerves.

(01-02-20) STATION Patients with tremors and altered gait....parkinsons...relevant exam

GASTROENTEROLOGY

Station 12: (25/6/18) A 45 yrs old male came with right hypochondrial pain since last night after having meal, bp:120/80, pulse:112, Temp:38c. Task: perform relevant abdominal exam and answer the questions. What is diagnosis. How will u manage the patient.

Diagnosis: acute cholecystitis
Differentials = peptic ulcers, acute gastritis, acute pancreatitis, biliary colic.



Acute cholecystitis

Pain is constant, colicky, usually occurs after fatty meal, lasts 30-90 minutes. Localized to epigastrium and rt upper quadrant, mat radiate to rt shoulder or rt scapula (cullin sign), nausea, vomiting, fever.

Examination: GPE: Anemia, jaundice, glossy tongue, high pulse, low BP

Abdominal exam: Fever, tachycardia, and tenderness in the RUQ or epigastric region, often with guarding or rebound. guarding increase on deep palpation of RUQ (murphys sign). Jaundice (~15% of patients), sluggish gut sounds.

Labs: CBC (↑ TLC), LFTs (↑ bili, ↑ transaminases, ↑ alk phosphatase), PT, UCE, Calcium, Lipase, amylase, imaging of abdomen (xray abdomen erect, U/S, CT, ERCP)

Treatment: NPO for bowel and gall bladder rest, maintain iv lines. Start iv fluids, give broad spectrum antibiotics (tazobactum piperacillin 4.5 gm i.v 8 hourly), analgesics (codone, acetaminphen), antiemetics.

Complication: sepsis, gangrene, perforation.

Refer to surgery for cholecystectomy (preferably laproscopic).

(01-11-2018) 11.epigastric pain 6 months abdominal exam .examiner ask diagnosis inv treatment then showed the inv when i said stool antigen for h pylori.it was +ve and asked treatment.

(01-02-20) STATION Examine, history and management of a patient with history of loose stools.

CARDIOVASCULAR

(01-11-2018) STATION 6: 45 y old htn pt came with high bp .examination cvs....counselling pt whole management which include additional anti hypertensive drug exercise diet and safety netting. exam ask which inv you will do.

(01-02-20) STATION Patient with cough and exertional dypnoea...hx.exam .management

(01-02-20) STATION Patient with SOB, ghabrahat, known hypertensive, has ecg of LVH, heart block?... takes atenolol 50mg od. Hx.exam.and management

ENDOCRINOLOGY

Station 07: 45 yrs old mr Qureshi came with lab reports his Bp is 150/90; Fbs= 116, HBA1c 7.1, cholesterol 210, Triglyceride: 200 HDL: 36, Cr:1.0. (Metabolic syndrome). Task relevant history…and tell management. Note LDL is not included in criteria. HDL and TAG included.

Component	Clinical Cutoff Values
Waist Circumference	≥102 cm in men ≥88 cm in women
Triglycerides	≥150 mg/dL
HDL Cholesterol	<40 mg/dL in men <50 mg/dL in women
Blood Pressure (BP)	≥130 mmHg Systolic BP or ≥85 mmHg Diastolic BP
Fasting Glucose	≥100 mg/dL
Diagnosis	Any 3 of the 5 features above

(01-11-2018) 2.young unmarried girl with history of hyperthyroidism....take history and relevant examination. questions ---diagnosis, investigations and treatment.

(01-02-20) STATION Female patient with weight gain fatigue, constipation.., hx, exam and management(hypothyroidism)

Q. patient Hba1c is 13. He is on 3 oral hypoglycemic. Well compliant to diet and medications. Counsel to initiate insulin.

ORTHOPEDICS

Station 6: (25/6/18)
60 yrs old male with unilateral (R) knee pain which increases on squatting and climbing stairs, No fever, normal BP and normal other joints. Task:- perform knee exam(Feel, move, walk)
Viva questions:/Diagnosis, treatment, non pharma. Exercise.

(01-11-2018) 4.neck pain 6 months. History, examination, investigation, treatment.

(01-02-20) STATION 1. Backckache. exam management

PSYCHIATRY

Station 09: (25/6/18) 30 yrs old female with complaint of distress. Task:- take history and discuss management plan.

Depression questionnaire

Over the last 2 weeks, how often have you been bothered by any of the following problems?

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself - or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed. Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual
9. Thoughts that you would be better off dead, or of hurting yourself
10. If you checked off any problems, how difficult have these problems made it for you at work, home, or with other people?

Psychotherapy (talk therapy) for Depression

1. Cognitive Therapy: At the heart of cognitive therapy is the idea that our thoughts can affect our emotions. Negative thoughts can contribute to and exacerbate depression. It's hard to feel good when you're stuck in a constant loop of negative thoughts. Cognitive therapy helps people learn to identify common patterns of negative thinking (known as cognitive distortions) and to turn those negative thought patterns into more positive ones, thus improving mood.[2] . Cognitive therapy usually lasts between six weeks to four months.

2. Behavioral Therapy: Whereas cognitive therapy is focused on the negative thoughts that contribute to depression, behavioral therapy is centered on changing behaviors that affect emotions. A central focus of behavioral treatment for depression is behavioral activation. This entails helping patients engage in activities that will enhance their feelings of well-being.

3. Cognitive-Behavioral Therapy: Because cognitive therapy and behavioral therapy work well together to treat depression and anxiety disorders, the two are often combined in an approach called cognitive behavioral therapy (CBT). CBT focuses on addressing both the negative thought patterns and the behaviors that contribute to depression. CBT generally involves between five to 20 structured sessions centered on addressing specific concerns.[4] CBT sessions are often accompanied by "homework," which may include keeping a journal, practicing relaxation activities, completing readings, and using worksheets focused on specific goals. Research suggests that CBT can be effective in the treatment of depression and may have lasting effects that prevent future relapses of depressive symptoms.[5]

4. Dialectical Behavior Therapy: Dialectical behavior therapy is mostly based on CBT. The key difference is that it asks individuals with depression to acknowledge and accept their negative thoughts and behaviors. Through the practice of validation, individuals can come to terms with their negative emotions, learn to cope with stress and regulate their reactions to it, and even improve their relationships with others.[6]

5. Psychodynamic Therapy: Psychodynamic therapy, also known as psychoanalytic therapy, assumes that depression can occur because of unresolved—usually unconscious—conflicts, often originating from childhood. The goals of this type of therapy are for the patient to become more aware of their full range of emotions, including contradictory and troubling ones, and to help the patient more effectively bear these feelings and put them in a useful perspective. This approach can also be helpful for building self-awareness and increasing certain emotional capacities.

6. Interpersonal Therapy: Interpersonal conflict and poor social support can also contribute to feelings of depression. This type of therapy involves examining social relationships with important people in your life. This can include your relationships with your partner, friends, family, and co-workers. The goal is to identify the role these relationships play in your life and find ways of resolving conflicts.

Approaches to Psychotherapy

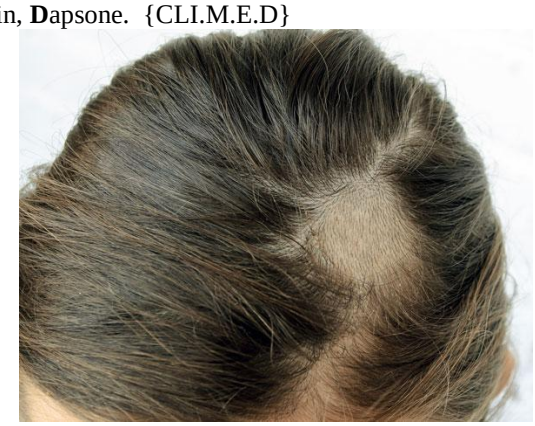
1. **Individual therapy**: This modality involves one-on-one work between patient and therapist.
2. **Family therapy**: This approach is most useful when it is necessary to work on dynamics within the family group. Family therapy can be especially helpful for children and teens.
3. **Group therapy**: Group therapy generally involves anywhere from three to 15 people. It offers everyone the opportunity to give and receive group support in coping with their particular issues and gives therapists the chance to observe how participants interact in group settings. It may also be a less expensive alternative to individual therapy.
4. **Couples therapy**: This type of therapy is geared toward married couples and those in committed relationships who desire to improve their functioning as a couple.

DERMATOLOGY

Station 10: (25/6/18) A 30 yrs old female came with lesion on scalp. Examination-not needed
Task:-take relevant history and describe management. After Hx examiner showed (lesion pic: tenia capitis). Note I took these pictures from internet, these are not original exam picture. (tinea is itchy; alopecia areata is non itchy)

Acne / comedonal acne

Tretinoin (retinoid)
Benzoyl peroxide
CLIndamycin, **M**inocyclin, **E**rythromycin, **D**apsone. {CLI.M.E.D}



(01-02-20) STATION Patient with c/o itchy scalp, has pic of scalp lesion....tenia capitis...history and management

Herpes zoster

Tinea corporis

EAR NOSE THROAT

(01-11-2018) 3. Cleaner with Allergic Rhinitis .take history exam, examinor asked findings +ve in pt .he had left nasal turbinate swollen. Treatment and prevention. (Here occupational history was very imp to ask).

(01-11-2018) 5.chronic Headache with recent unconsciousness---diagnosis –SOL, tuberculoma, tumor. investigation of choice (MRI brain with contrast). Relevant exam of headache

ONCOLOGY

Station 11: (25/6/18) son of a 70 yrs old male, his father is diagnosed with prostate carcinoma take history and answer the questions. Viva Q: Management of bed sores, vomiting and spine pain in this patient.

(01-02-20) STATION Counselling of a patient with breast CA stage 1 report (report just received)

(01-11-2018) 8.female with report showing Ca Breast stage 3 counselling

TOACS STATIONS 02.10.2021
1.OTITIS MEDIA
2.COPD

3 COVID
4.DEPRESSION
5.APPENDICITIS
6.LVF
7.SOL
8.TENIA CAPITIS
9.INSULIN COUNSELLING
10.BACKACHE
11.ANXIETY
12.GENITAL HERPES

oacs 2018 nov 1 .measels child with mother ..take history and discuss managment with patient.examiner asked treatment.
2.young unmartied girl with history of htperthyroidism....take history and relevant examination.question ---dx,inv and treatment.
3. Cleaner with Allergic Rhinits .take history exam,examinor asked findings +ve in pt .he had left nasal turbinate swollen.treatment Nd prevention.here work history was very imp to ask.
4.neck pain 6 months .history exam .inv .treatment 5.chronic Headache with recent unconsciousness---diagnosis --SOL or tumor.inv of choice. Relevant exam of headache
6.45 y old htn pt came with high bp .examination cvs....counceln pt whole management which include additional anti hypertensive drug exercise diet and safety netting.exam ask which inv you will do
7.antenatal care of 1st pregnency with abdomialn pain history .questuon by examinor Diet treatment drugs to avoid.folloup visits 8.female with report showing Ca Breast stage 3 counselling
9.bronchial asthma pt .do full chest exam and explain inhaler technique
10.young girl with dog bite.history councell for full management to the pt.examinor ask the schedule of vaccine.
11.epigastric pain 6 months abdominal exam .examjnor ask diagnosis inv treatment then showed the inv when i said stool antigen for h pylori.it was +ve and asked treatment.
12. Renal stones Examiner asked investigations nd treatment A 40+ male with h/ o pain r lumber region passed stone now pain relived history furthur labs
TOACS 25/6/18
Station 01: 25 year old male with history of fever for5 days, productive cough and right sided chest pain, perform respiratory exam Note(examiner didn't allow any for examination) Viva question :what is diagnisis? What findings u expect?(Examintion,plapation, auscultation) What's bronchial breathing, vesicular? Difference? Is there Gap in inspiration/expiration? How u will do Percussion (plz do on table) the lower finger is called? The striking finger is called?(this Question was unusual ☹—-ans:- Plexer and pleximeter—-nonstriking finger (known as the pleximeter)
Station 2: 50 yrs old male with right sided facial weakness since last night, he is hyperrtensive and take losartan 50 mg od, his bp is 130/80 Perform his cvs exam and relevant crianial nerves cranial nerves 1, 5, 8 and 12 are normal Note:- PT was young boy, examiner was just observer.(greet pt, shake hand, sit him comfortably,Do the target Commands, Cranial , and Cns related with stroke , then CVS-examination Station 03: 50 yrs old male with high grade fever for 2 days, Command written on paper was: Take a history of fever and Ans the examiner at end. After full Hx of PUO in 3-4 min examiner showed (high load of plasmodium vivax, falciparum note seen. Viva question: Various treatment, treatment of recurrence, pharma, non pharma
[5:35 pm, 03/12/2021] Rabia Mcps Group Admin: Station 04:A mother of 1.5 yrs old concerned about her child who has not started talking yet... Take history and answer the questions 3-4 min Hx how , what etc etc Question? Dx? Causes? Referral? Investigation if any ?
Staion 05: A 30 yrs old female came with vaginal discharge take history and answer the questions: Q1 what is diagnosis,(candidiasis bcz whitish and itchy) treatment? Predisposition? Dx? treatment of recurrence, lab test to evaluate rucurrence (FBS)
Station 6: 60 yrs old male with unilateral (R)knee pain which increases on squrting and climbing stairs, No fever, normal BP and normal other joints Task:- perform knee exam(Feel,move,walk) Viva questions:/Diagnosis, treatment, non pharma. Exercise
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Station 09: 30 yrs old female with complaint of distress , Task :-take history and discuss management plan Station 10: A 30 yrs old female came with lesion on scalp. Examination-not needed Task:-take relevant history and describe management After Hx examiner showed (lesion pic:tenia capitis)
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Station 12: A 45 yrs old male came with right hypochndrial pain since last night after having meal, bp:120/80, puse:112, Temp:38c Task :- perform relevant abd. Exam and answer the questions Viva Questions: What is diagnosis What is management.
[5:36 pm, 03/12/2021] Rabia Mcps Group Admin: Ac appendicitis
Bact conjunctivitis
Dm
Tenia corporus
Anxiety
Frozen shoulder
Epilepsy
Otitis media
TB Rx
TIA

Table-8: New cases and previously treated cases regimen and fixed-dose combinations dosages in adults

		Duration	Weight band (kg)/ based FDC drug dose (Tablets)		
			30-39	40-54	55 & >
NEW	**New TB and B+ and CD Previously treated TB cases**				
Initial Phase	HRZE (H 75mg + R 150mg + Z 400mg + E 275mg)	2month	2	3	4
Continuation Phase	HR (H 75mg + R 150mg)	4month	2	3	4

Duration of treatment in EP TB

Site of EP	Regimen	Total duration
Cervical lymph node & pleural effusion	2 HRZE / 4 HR	6 months
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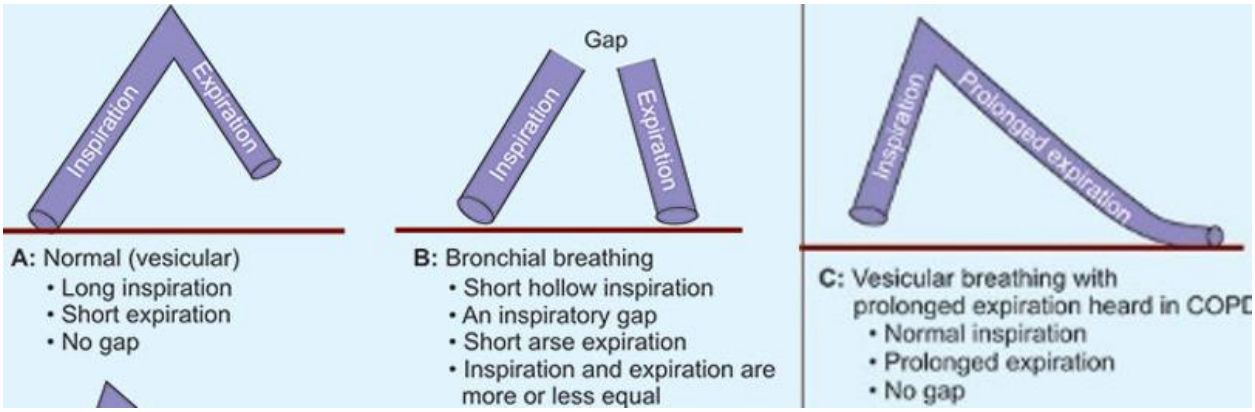
Adjuvant steroids (prednisolone or dexamethasone) 6-8 weeks for tuberculous meningitis and pericarditis



Inhaler technique

MDIs – shake your inhaler before using it. Hold the inhaler with the mouthpiece down. Breathe out fully before using inhaler. Place your lips around the mouthpiece so that you form a tight seal. Lift your chin slightly before breathing in. You need to breathe in slow and steady and, at the same time, press the canister on the inhaler once. Continue to breathe in slowly over 3 to 5 seconds, until your lungs feel full. Hold your breath for 5-10 after taking inhaler. Rinse your mouth out after using a steroid inhaler to prevent oral thrush.

Smoking cessation

Signs of severe nicotine dependence in people who smoke include:

1. Smoking more than 1 pack a day 2. Smoking within 5 minutes of waking up 3. Smoking even while sick 4. Waking up at night to smoke 5. Smoking to ease symptoms of withdrawal	1. ایک دن میں 1 پیک سے زیادہ سگریٹ نوشی 2. بیدار ہونے کے 5 منٹ کے اندر سگریٹ نوشی 3. بیمار رہتے ہوئے بھی سگریٹ نوشی 4. سگریٹ نوشی کے لیے رات کو جاگنا 5. دستبرداری کی علامات کو کم کرنے کے لیے سگریٹ نوشی

The "5 A's" to quit smoking: Ask, Advise, Assess, Assist & Arrange.

1. **Ask** - Identify and document tobacco use status for every patient at every visit.**Advise** - In a clear, strong, and personalized manner, urge every tobacco user to quit. focus on benefits of quitting rather than harms of continued tobacco use.
2. *Assess* each smoker's willingness to make a quit attempt—Is the tobacco user ready to set a "quit date" in the next 30 days? If not, explore his barriers to taking action and help him to overcome them.
3. **Assist** - For the patient willing to make a quit attempt, use counseling and pharmacotherapy to help him or her quit.
4. **Arrange** - Schedule follow up contact, in person or by telephone, preferably within the first week after the quit date.

Treatment to quit smoking

1. Smoking cessation counselling can be provided effectively in person or by telephone
2. -Drug treatments (nicotine replacement therapy, bupropion SR, varenicline) increase the chance of success of a quit attempt:

a. Nicotine replacement therapy (gum, patch, tablet, lozenge, inhaler, or nasal spray) almost doubles the chance of success, compared with placebo

b. Bupropion SR, an antidepressant, also approximately doubles a smoker's chance of success.

c. Varenicline (champix), a partial agonist of the α4β2 nicotinic receptor, is a new agent that nearly tripled the chance of success compared with placebo and was more effective than placebo and than bupropion in two recent clinical trial.

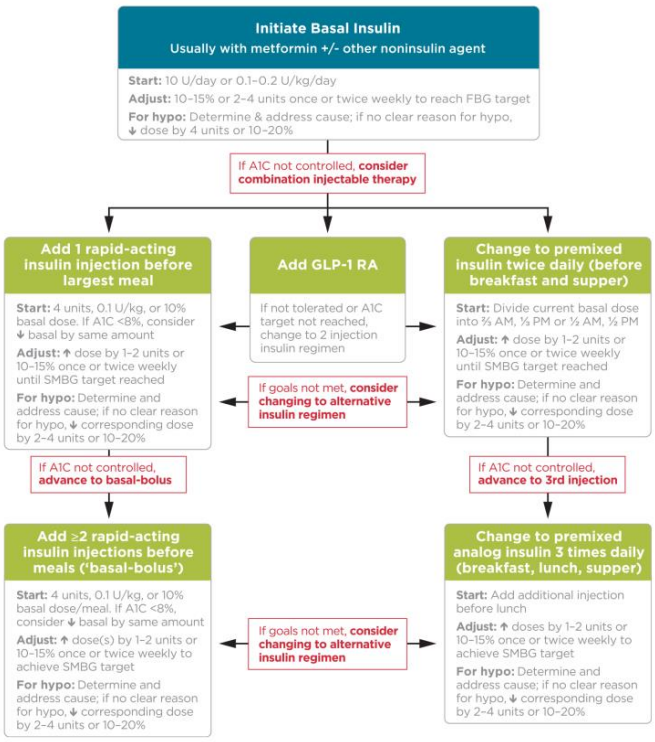
Robert Buckman's 'SPIKE' protocol has six-steps for breaking bad news.

7. Getting started.
8. Finding out how much the patient knows.
9. Finding out how much the patient wants to know.
10. Sharing the information.
11. Responding to the patient's feelings.
12. Planning and follow-through.

American Diabetes Association Guidelines- Initiating insulin

The American Diabetes Association (ADA) recommends initiation of basal insulin at 10 units/day or 0.1–0.2 units/kg/day, adjusted by 10–15% or 2–4 units once or twice weekly to reach a target fasting plasma glucose (FPG) in patients whose A1C remains uncontrolled after >3 months of triple combination therapy, whose A1C is >10%, whose blood glucose is >300 mg/dL, or who are symptomatic of hyperglycemia. Three regimen options should be considered:

1. Regimen 1: Administer one rapid-acting insulin injection before the meal with the greatest carbohydrate content; if the glycemic target is not met, progress to two or more rapid-acting insulin injections before meals (basal-bolus regimen).
2. Regimen 2: Add a GLP-1 receptor agonist (Exenatide, liraglutide). If target A1C remains unmet or the regimen is not tolerated, patients may discontinue the GLP-1 receptor agonist and switch to regimen 1 or 3.
3. Regimen 3: Replace basal insulin with premixed insulin at a 75/25, 70/30, or 50/50 mix twice (usually before breakfast or dinner) or thrice daily (before breakfast, lunch, and dinner). Basal insulin and GLP-1 receptor agonists should be discontinued before initiating premixed insulin.



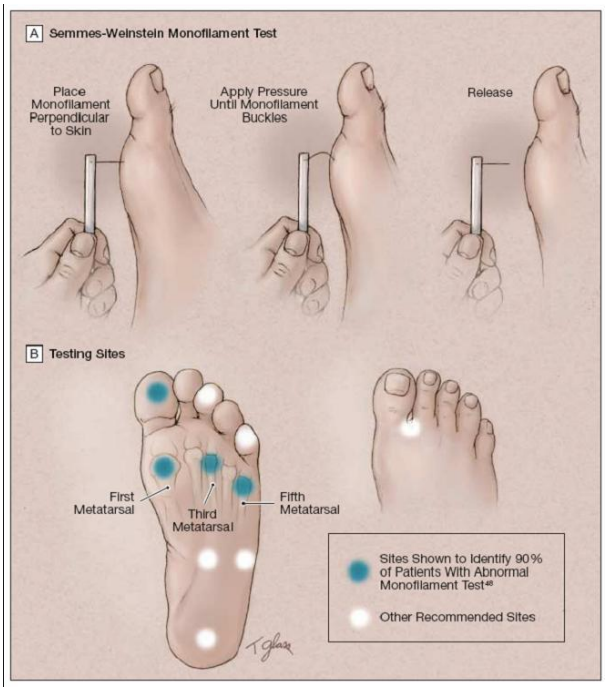
Starting insulin

Steps for Injecting insulin

Injection sites include the abdomen, the back of the arms, the outer thighs (these sites have subcutaneous tissue under the skin and the minimal number of nerve endings). Try not to inject **too close to your belly button** (at least two inches away) or into any moles or scars. Rotate the injection sites to minimize the risk of hard lumps or extra fat deposits in the area. **Dial the dose. Sterilize** the injection area with an alcohol swab and allow the site to dry. **To pinch or not to pinch?** If the pen needle is 5 mm or less, then no pinching of the skin is required and the injection can go into the skin at a 90-degree angle. If the pen needle is longer than 5 mm, pinching the skin to avoid injecting insulin into the muscle is recommended. Remind your patients to make sure that the skin is pulled up and not the muscle. The injection can be at a 90-degree angle or a 45-degree angle to avoid going into the muscle. **Press the injection button.** Patients should press the injection button in all the way. Patients should slowly count to 5 before the insulin pen is removed to ensure that the entire insulin dose is delivered. **Remove and cap the needle. Storage:** Injecting cold insulin can be painful. Therefore, storing the insulin pen that is currently being used at room temperature (cooler than 86°F) is recommended. If opened insulin is stored at room temperature, it will last about 1 month. It is a good idea for patients to date the insulin once it is opened. Unopened insulin pens should be stored in the refrigerator (36°F to 46°F) until they are ready to use. Instruct your patients to take the new insulin pen out of the refrigerator well ahead of the first use to allow it to warm to room temperature.

Monofilament test for diabetic neuropathy

1. Daily Foot Exams
2. Wearing socks every day
3. Never walking barefoot
4. Wear proper fitting shoes
5. See a podiatrist (foot doctor) once a year or more depending on your risk factors
6. Clean your feet daily
7. Change your socks daily
8. Don't cut nail deeper



GINA 2019-Stepwise approach

	Step 1	Step 2	Step 3	Step 4	Step 5
Preferred option	As needed Low dose ICS-Formeterol	As needed Low dose ICS-Formeterol	Daily Low dose ICS-LABA	Daily Medium dose ICS-LABA	Daily High dose ICS-LABA
		Or Daily Low dose ICS			

	WHO reference range
Total sperm count in ejaculate	39–928 million
Ejaculate volume	1.5–7.6 mL
Sperm concentration	15–259 million per mL
Total motility (progressive and non-progressive)	40–81 percent
Progressive motility	32–75 percent
Sperm morphology	4–48 percent

Malingering, somatization, factitious disorder

Malingering is intentional feigning of physical or psychologic symptoms motivated by an external incentive, which distinguishes malingering from factitious disorders.

People with factitious disorder deliberately produce symptoms of an illness for the purpose of receiving care and attention in a medical setting. The symptoms aren't intended to get them practical benefits — the gain is believed to be mainly psychological. The term Munchausen syndrome is no longer used for factitious disorders.

The important difference between somatization and factitious disorder is that in somatoform disorders the physical symptoms are real, whereas in factitious disorders they are not.

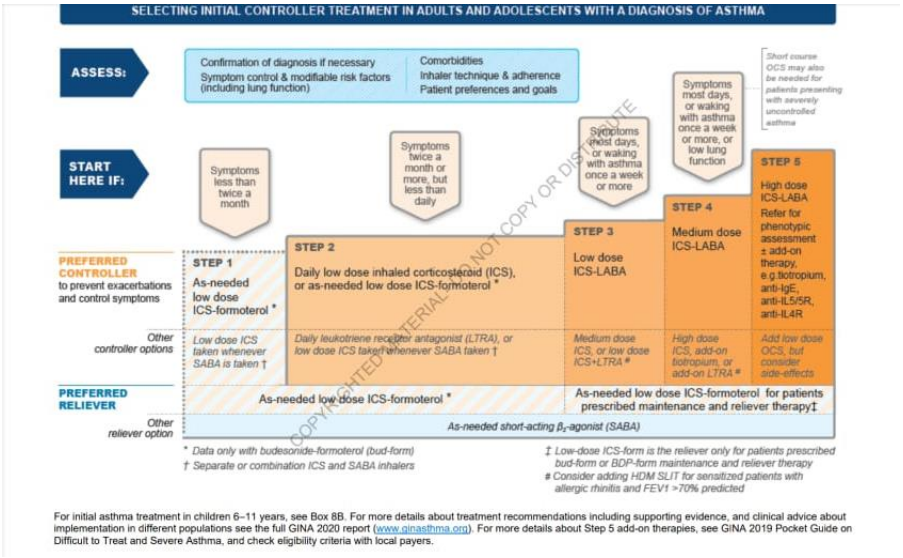
	Symptoms without Identifiable Cause			
	Gain	Deliberate	Psychiatric Disorder	Agrees to Procedures
Malingering	External	✓		
Factitious Disorder	Sick Role	✓	✓	✓
Somatization			✓	✓

Generalized anxiety disorder

Treatment: Cognitive behavioral therapy. 2. SSRI. 3. Benzodiazepines are not a good choice for treatment.

Depression questionnaire

Over the last 2 weeks, how often have you been bothered by any of the following problems? 1. Little interest or pleasure in doing things 2. Feeling down, depressed, or hopeless 3. Trouble falling or staying asleep, or sleeping too much 4. Feeling tired or having little energy 5. Poor appetite or overeating 6. Feeling bad about yourself - or that you are a failure or have let yourself or your family down 7. Trouble concentrating on things, such as reading the newspaper or watching television 8. Moving or speaking so slowly that other people could have noticed. Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual 9. Thoughts that you would be better off dead, or of hurting yourself 10. If you checked off any problems, how difficult have these problems made it for you at work, home, or with other people?	پچھلے 2 ہفتوں کے دوران، آپ کو مندرجہ ذیل مسائل میں سے کتنی بار پریشان کیا گیا ہے؟ 1. کام کرنے میں کم دلچسپی 2. احساس کمتری، اداس، یا نا امید ہونا 3. سونے میں دشواری، یا بہت زیادہ سونا 4. تھکاوٹ یا کم توانائی محسوس کرنا 5. بھوک کم لگنا یا زیادہ کھانا 6. اپنے بارے میں برا محسوس کرنا - یا یہ کہ آپ ناکام ہیں یا اپنے آپ کو یا اپنے خاندان کو مایوس کر چکے ہیں۔ 7. چیزوں پر توجہ مرکوز کرنے میں پریشانی، جیسے اخبار پڑھنا یا ٹیلی ویژن دیکھنا 8. اتنی آہستہ حرکت کرنا یا بولنا کہ دوسرے لوگوں نے محسوس کیا ہو۔ یا اس کے برعکس - اتنا بے چین یا بے چین ہونا کہ آپ معمول سے بہت زیادہ گھوم رہے ہیں۔ 9. یہ خیال کہ آپ مرنے سے بہتر ہوں گے، یا اپنے آپ کو تکلیف دینے کے 10. اگر آپ نے کسی بھی مسئلے کو چیک کیا ہے، تو ان مسائل نے آپ کے لیے کام، گھر، یا دوسرے لوگوں کے ساتھ کتنا مشکل بنا دیا ہے؟



Acute cholecystitis

Examination: The physical examination may reveal fever, tachycardia, and tenderness in the RUQ or the epigastric region, often with guarding or rebound. The Murphy sign, which is specific but not sensitive for cholecystitis, is described as tenderness and an inspiratory pause elicited during palpation of the RUQ. A palpable gallbladder or fullness of the RUQ is present in 30%-40% of cases. Jaundice may be noted in approximately 15% of patients.

Diagnosis: CBC, UCE, RBS, LFTs, PT. Imaging of abdomen: plain x-ray of the abdomen, ultrasonography (best initial test), computed tomography (CT), magnetic resonance imaging (MRI), hepatobiliary scintigraphy (HBS), and endoscopy.

Treatment: In acute cholecystitis, the initial treatment includes bowel rest, intravenous hydration, correction of electrolyte abnormalities, analgesia (oxycodone/acetaminophen, hydrocodone/acetaminophen), antiemetics and intravenous antibiotics. For mild cases of acute cholecystitis, antibiotic therapy with a single broad-spectrum antibiotic is adequate. Some options include the following:

1. piperacillin/tazobactam 4.5 g IV q8h
2. ceftriaxone+ metronidaole
3. meropenem (1 g IV q8h).
4. In severe life-threatening cases imipenem/cilastatin (500 mg IV q6h).

Surgical management: cholecystectomy preferably laproscopic.

Acute pancreatitis:

Practice Essentials

Recognizing patients with severe acute pancreatitis as soon as possible is critical for achieving optimal outcomes. Management depends largely on severity. Medical treatment of mild acute pancreatitis is relatively straightforward. Treatment of severe acute pancreatitis involves intensive care. Surgical intervention (open or minimally invasive) is indicated in selected cases.

Signs and symptoms

Symptoms of acute pancreatitis include the following:

- Abdominal pain (cardinal symptom): Characteristically dull, boring, and steady; usually sudden in onset and gradually becoming more severe until reaching a constant ache; most often located in the upper abdomen and may radiate directly through to the back
- Nausea and vomiting, sometimes with anorexia
- Diarrhea

Patients may have a history of the following:

- Recent operative or other invasive procedures
- Family history of hypertriglyceridemia
- Previous biliary colic and binge alcohol consumption (major causes of acute pancreatitis)

The following physical findings may be noted, varying with the severity of the disease:

- Fever (76%) and tachycardia (65%); hypotension
- Abdominal tenderness, muscular guarding (68%), and distention (65%); diminished or absent bowel sounds
- Jaundice (28%)
- Dyspnea (10%); tachypnea; basilar rales, especially in the left lung
- In severe cases, hemodynamic instability (10%) and hematemesis or melena (5%); pale, diaphoretic, and listless appearance
- Occasionally, extremity muscular spasms secondary to hypocalcemia

The following uncommon physical findings are associated with severe necrotizing pancreatitis:

- Cullen sign (bluish discoloration around the umbilicus resulting from hemoperitoneum)
- Grey-Turner sign (reddish-brown discoloration along the flanks resulting from retroperitoneal blood dissecting along tissue planes); more commonly, patients may have a ruddy erythema in the flanks secondary to extravasated pancreatic exudate
- Erythematous skin nodules, usually no larger than 1 cm and typically located on extensor skin surfaces; polyarthritis

See Presentation for more detail.

Diagnosis

Once a working diagnosis of acute pancreatitis is reached, laboratory tests are obtained to support the clinical impression, such as the following:

- Serum amylase and lipase
- Liver-associated enzymes
- Blood urea nitrogen (BUN), creatinine, and electrolytes
- Blood glucose
- Serum cholesterol and triglyceride
- Complete blood count (CBC) and hematocrit; NLR
- C-reactive protein (CRP)
- Arterial blood gas values
- Serum lactic dehydrogenase (LDH) and bicarbonate

- Immunoglobulin G4 (IgG4): elevated in autoimmune pancreatitis

Diagnostic imaging is unnecessary in most cases but may be obtained when the diagnosis is in doubt, when pancreatitis is severe, or when a given study might provide specific information required. Modalities employed include the following:

- Abdominal radiography (limited role): Kidneys-ureters-bladder (KUB) radiography with the patient upright is primarily performed to detect free air in the abdomen
- Abdominal ultrasonography (most useful initial test in determining the etiology, and is the technique of choice for detecting gallstones)
- Endoscopic ultrasonography (EUS) (used mainly for detection of microlithiasis and periampullary lesions not easily revealed by other methods)
- Abdominal computed tomography (CT) scanning (generally not indicated for patients with mild pancreatitis but always indicated for those with severe acute pancreatitis)
- Endoscopic retrograde cholangiopancreatography (ERCP); to be used with extreme caution in this disease and never as a first-line diagnostic tool [1]
- Magnetic resonance cholangiopancreatography (MRCP) (not as sensitive as ERCP but safer and noninvasive)

Other diagnostic modalities include the following:

- CT-guided or EUS-guided aspiration and drainage
- Genetic testing

Acute pancreatitis is broadly classified as either mild or severe. According to the Atlanta classification, severe acute pancreatitis is signaled by the following [2] :

- Evidence of organ failure (eg, systolic blood pressure below 90 mm Hg, arterial partial pressure of oxygen [$P_a O_2$] 60 mm Hg or lower, serum creatinine level 2 mg/dL or higher, GI bleeding amounting to 500 mL or more in 24 hours)
- Local complications (eg, necrosis, abscess, pseudocyst)
- Ranson score of 3 or higher or APACHE score of 8 or higher

See Workup for more detail.

Management

Medical management of mild acute pancreatitis is relatively straightforward; however, patients with severe acute pancreatitis require intensive care. Initial supportive care includes the following:

- Fluid resuscitation [3]
- Nutritional support

Antibiotic therapy is employed as follows:

- Antibiotics (usually of the imipenem class) should be used in any case of pancreatitis complicated by infected pancreatic necrosis but should not be given routinely for fever, especially early in the presentation

- Antibiotic prophylaxis in severe pancreatitis is controversial; routine use of antibiotics as prophylaxis against infection in severe acute pancreatitis is not currently recommended

Surgical intervention (open or minimally invasive) is indicated when an anatomic complication amenable to a mechanical solution is present. Procedures appropriate for specific conditions involving pancreatitis include the following:

- Gallstone pancreatitis: Cholecystectomy
- Pancreatic duct disruption: Image-guided percutaneous placement of a drainage tube into the fluid collection [4] ; stent or tube placement via ERCP; in refractory cases, distal pancreatectomy or a Whipple procedure
- Pseudocysts: None necessary in most cases; for large or symptomatic pseudocysts, percutaneous aspiration, endoscopic transpapillary or transmural techniques, or surgical management
- Infected pancreatic necrosis: Image-guided aspiration; necrosectomy
- Pancreatic abscess: Percutaneous catheter drainage and antibiotics; if no response, surgical debridement and drainage.

The goal of pharmacotherapy is to relieve pain and minimize complications. Currently, no medications are used to treat acute pancreatitis specifically. Therapy is primarily supportive and involves intravenous (IV) fluid hydration, analgesics, antibiotics (in severe pancreatitis), and treatment of metabolic complications (eg, hyperglycemia and hypocalcemia).

Acute appendicitis

Signs and symptoms

The clinical presentation of appendicitis is notoriously inconsistent. The classic history of anorexia and periumbilical pain followed by nausea, right lower quadrant (RLQ) pain, and vomiting occurs in only 50% of cases. Features include the following:

- Abdominal pain: Most common symptom
- Nausea: 61-92% of patients
- Anorexia: 74-78% of patients
- Vomiting: Nearly always follows the onset of pain; vomiting that precedes pain suggests intestinal obstruction
- Diarrhea or constipation: As many as 18% of patients

Features of the abdominal pain are as follows:

- Typically begins as periumbilical or epigastric pain, then migrates to the RLQ [1]
- Patients usually lie down, flex their hips, and draw their knees up to reduce movements and to avoid worsening their pain
- The duration of symptoms is less than 48 hours in approximately 80% of adults but tends to be longer in elderly persons and in those with perforation.

Physical examination findings include the following:

- Rebound tenderness, pain on percussion, rigidity, and guarding: Most specific finding
- RLQ tenderness: Present in 96% of patients, but nonspecific

- Left lower quadrant (LLQ) tenderness: May be the major manifestation in patients with situs inversus or in patients with a lengthy appendix that extends into the LLQ
- Male infants and children occasionally present with an inflamed hemiscrotum
- In pregnant women, RLQ pain and tenderness dominate in the first trimester, but in the latter half of pregnancy, right upper quadrant (RUQ) or right flank pain may occur

The following accessory signs may be present in a minority of patients:

- Rovsing sign (RLQ pain with palpation of the LLQ): Suggests peritoneal irritation
- Obturator sign (RLQ pain with internal and external rotation of the flexed right hip): Suggests the inflamed appendix is located deep in the right hemipelvis
- Psoas sign (RLQ pain with extension of the right hip or with flexion of the right hip against resistance): Suggests that an inflamed appendix is located along the course of the right psoas muscle
- Dunphy sign (sharp pain in the RLQ elicited by a voluntary cough): Suggests localized peritonitis
- RLQ pain in response to percussion of a remote quadrant of the abdomen or to firm percussion of the patient's heel: Suggests peritoneal inflammation
- Markle sign (pain elicited in a certain area of the abdomen when the standing patient drops from standing on toes to the heels with a jarring landing): Has a sensitivity of 74% [2]

See Clinical Presentation for more detail.

Diagnosis

The following laboratory tests do not have findings specific for appendicitis, but they may be helpful to confirm diagnosis in patients with an atypical presentation:

- CBC
- C-reactive protein (CRP)
- Liver and pancreatic function tests
- Urinalysis (for differentiating appendicitis from urinary tract conditions)
- Urinary beta-hCG (for differentiating appendicitis from early ectopic pregnancy in women of childbearing age)
- Urinary 5-hydroxyindoleacetic acid (5-HIAA)

CBC

- WBC >10,500 cells/µL: 80-85% of adults with appendicitis
- Neutrophilia >75-78% of patients
- Less than 4% of patients with appendicitis have a WBC count less than 10,500 cells/µL and neutrophilia less than 75%

In infants and elderly patients, a WBC count is especially unreliable because these patients may not mount a normal response to infection. In pregnant women, the physiologic leukocytosis renders the CBC count useless for the diagnosis of appendicitis.

C-reactive protein

- CRP levels >1 mg/dL are common in patients with appendicitis
- Very high levels of CRP in patients with appendicitis indicate gangrenous evolution of the disease, especially if it is associated with leukocytosis and neutrophilia
- In adults who have had symptoms for longer than 24 hours, a normal CRP level has a negative predictive value of 97-100% for appendicitis [3, 4, 5]

Urinary 5-HIAA

HIAA levels increase significantly in acute appendicitis and decrease when the inflammation shifts to necrosis of the appendix. [6] Therefore, such decrease could be an early warning sign of perforation of the appendix.

CT scanning

- CT scanning with oral contrast medium or rectal Gastrografin enema has become the most important imaging study in the evaluation of patients with atypical presentations of appendicitis
- Low-dose abdominal CT may be preferable for diagnosing children and young adults in whom exposure to CT radiation is of particular concern [7]

Ultrasonography

- Ultrasonography may offer a safer alternative as a primary diagnostic tool for appendicitis, with CT scanning used in those cases in which ultrasonograms are negative or inconclusive
- In pediatric patients, American College of Emergency Physicians (ACEP) clinical policy recommends ultrasonography for confirmation, but not exclusion, of acute appendicitis; to definitively exclude acute appendicitis, the ACEP recommends CT [8, 9]
- A healthy appendix usually cannot be viewed with ultrasonography; when appendicitis occurs, the ultrasonogram typically demonstrates a noncompressible tubular structure of 7-9 mm in diameter
- Vaginal ultrasonography alone or in combination with transabdominal scan may be useful to determine the diagnosis in women of childbearing age [10]

Other imaging studies

- Kidneys-ureters-bladder radiographs: Insensitive, nonspecific, and not cost-effective
- Barium enema study: Has essentially no role in the diagnosis of acute appendicitis
- Radionuclide scanning: Localized uptake of tracer in the RLQ suggests appendiceal inflammation
- MRI: Useful in pregnant patients if graded compression ultrasonography is nondiagnostic

See Workup for more detail.

Management

Emergency department care is as follows:

- Establish IV access and administer aggressive crystalloid therapy to patients with clinical signs of dehydration or septicemia
- Keep patients with suspected appendicitis NPO
- Administer parenteral analgesic and antiemetic as needed for patient comfort; no study has shown that analgesics adversely affect the accuracy of physical examination [11]

Appendectomy remains the only curative treatment of appendicitis, but management of patients with an appendiceal mass can usually be divided into the following 3 treatment categories:

- Phlegmon or a small abscess: After IV antibiotic therapy, an interval appendectomy can be performed 4-6 weeks later
- Larger well-defined abscess: After percutaneous drainage with IV antibiotics is performed, the patient can be discharged with the catheter in place; interval appendectomy can be performed after the fistula is closed
- Multicompartmental abscess: These patients require early surgical drainage

Antibiotics

- Antibiotic prophylaxis should be administered before every appendectomy
- Preoperative antibiotics should be administered in conjunction with the surgical consultant
- Broad-spectrum gram-negative and anaerobic coverage is indicated
- Cefotetan and cefoxitin seem to be the best choices of antibiotics
- In penicillin-allergic patients, carbapenems are a good option
- Pregnant patients should receive pregnancy category A or B antibiotics
- Antibiotic treatment may be stopped when the patient becomes afebrile and the WBC count normalizes

Appendectomy remains the only curative treatment of appendicitis.

Tension pneumothorax

Tension pneumothorax is classically characterized by hypotension and hypoxia. On examination, breath sounds are absent on the affected hemothorax and the trachea deviates away from the affected side. The thorax may also be hyperresonant; jugular venous distention and tachycardia may be present. Symptomatic patients will present with sharp pleuritic pain that can radiate to the ipsilateral back or shoulder. Diagnosis is clinical. CXR/ imaging of test and ABGs are helpful for confirmation. Treatment of tension pneumothorax is high flow oxygen and **immediate needle decompression** by inserting a large-bore (eg, 14- or 16-gauge) needle into the 2nd intercostal space in the midclavicular line. Air will usually gush out.

TLE combination for HIV

TDF TENOFOVIR 300 MG
3TC LAMIVUDINE 300 MG
EFV EFAVIRENZ 600 MG

ONCE OD, LIFE LONG

TLD combination for HIV

TDF: tenofovir disoproxil fumurate 300 mg
3TC: lamivudine 300 mg
DTG: dolutegravir 50 mg
once daily-life long

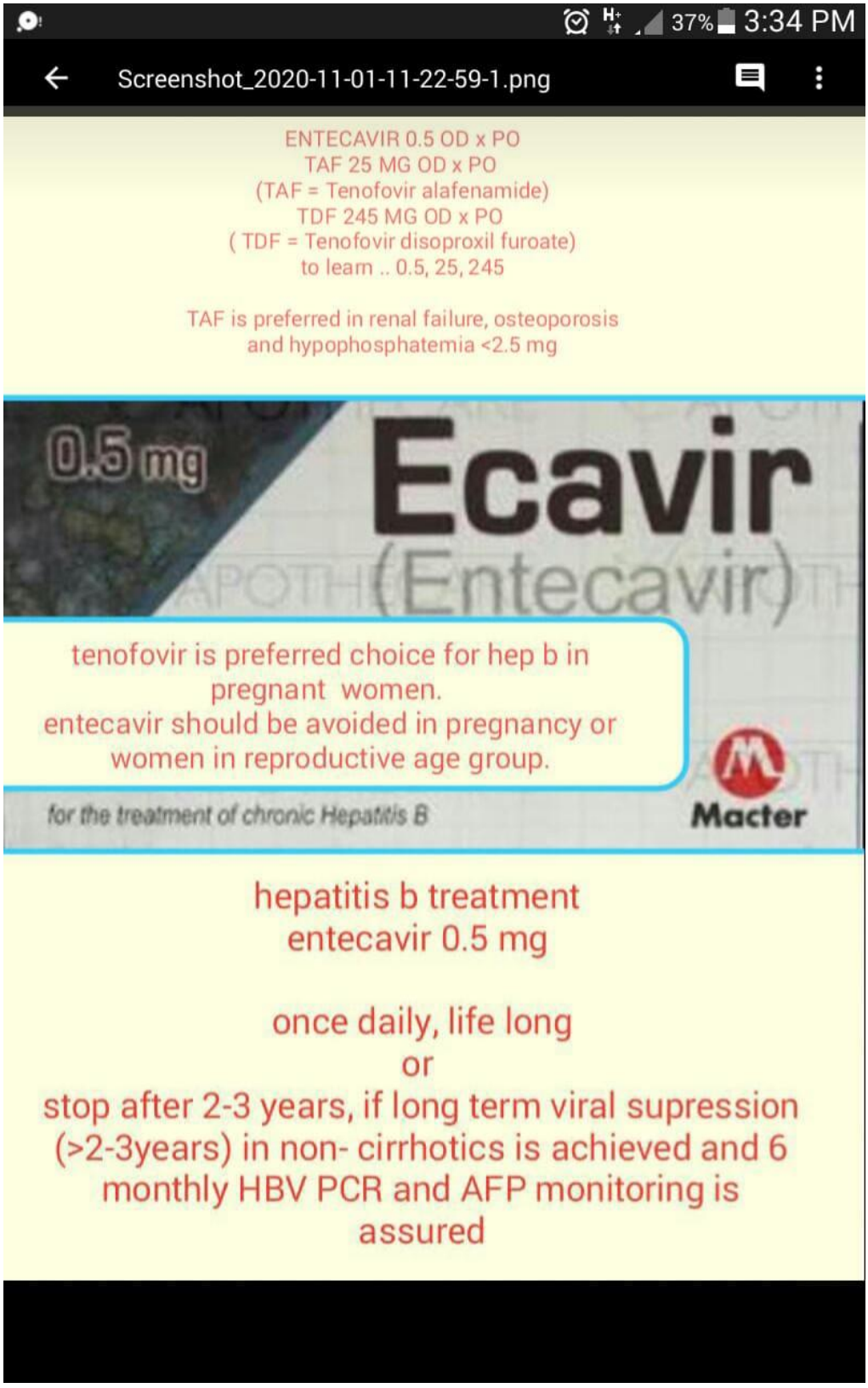
SYRUP NIVERAPINE FOR PROPHYLAXIS OF INFANTS BORN TO HIV POSITIVE MOTHERS

Table 2. HCV DAAs approved in Europe recommended in this document and yet unapproved paediatric formulations (information provided by Abbvie and Gilead on request from the panel).

Product	Presentation	Posology
Sofosbuvir	Tablets containing 400 mg of sofosbuvir	One tablet once daily
	Half-strength tablets containing 200 mg of sofosbuvir[a]	One tablet once daily
Sofosbuvir/velpatasvir	Tablets containing 400 mg of sofosbuvir and 100 mg of velpatasvir	One tablet once daily
	Half-strength tablets containing 200 mg of sofosbuvir and 50 mg of velpatasvir[a,b]	One tablet once daily
	Granules containing 50 mg of sofosbuvir and 12.5 mg of velpatasvir[a,b]	Three or four granules once daily, according to body weight
Sofosbuvir/velpatasvir/voxilaprevir	Tablets containing 400 mg of sofosbuvir, 100 mg of velpatasvir and 100 mg of voxilaprevir	One tablet once daily with food
Glecaprevir/pibrentasvir	Tablets containing 100 mg of glecaprevir and 40 mg of pibrentasvir	Three tablets once daily with food
	Film-coated granules of glecaprevir and pibrentasvir in sachets containing 50 mg of glecaprevir and 20 mg of pibrentasvir mixed together in a small amount of food[a,b]	Three to five sachets once daily, according to body weight
Grazoprevir/elbasvir	Tablets containing 100 mg of grazoprevir and 50 mg of elbasvir	One tablet once daily

DAAs, direct-acting antivirals.

- The endpoint of therapy is undetectable HCV RNA in serum or plasma by an assay with a lower limit of detection <15 IU/ml, 12 weeks (SVR12) or 24 weeks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Screenshot_2020-11-01-11-22-59-1.png
ENTECAVIR 0.5 OD x PO
TAF 25 MG OD x PO
(TAF = Tenofovir alafenamide)
TDF 245 MG OD x PO
(TDF = Tenofovir disoproxil furoate)
to learn .. 0.5, 25, 245
TAF is preferred in renal failure, osteoporosis
and hypophosphatemia <2.5 mg
0.5 mg
Ecavir
(Entecavir)
tenofovir is preferred choice for hep b in
pregnant women.
entecavir should be avoided in pregnancy or
women in reproductive age group.
for the treatment of chronic Hepatitis B
Macter
hepatitis b treatment
entecavir 0.5 mg
once daily, life long
or
stop after 2-3 years, if long term viral supression
(>2-3years) in non- cirrhotics is achieved and 6
monthly HBV PCR and AFP monitoring is
assured